

## WHAT IS CLAIMED IS:

1. A method of tracking a network communication line by network probe terminal ("terminal agent") simulating a browser ("original browser") activity of a given terminal comprising the steps of:
  - I. Accessing the network communication line;
  - II. Tracing TCP/IP data packets routed through the communication line;
  - III. Selecting TCP/IP data packets relating to a given IP address ("identified data packets");
  - IV. Selecting from the identified data packets current requests for new connections ("original requests");
  - V. Selecting from the identified data packets current web page components indicating new addresses ("new navigation components");
  - VI. Dividing the new navigation components into two categories;
    - (f1) embedded objects or frames ("false new components");
    - (f2) hyperlinks ("true new components");
  - VII. Dividing the original requests into "primary" or "secondary" requests according to the following criteria, respectively;

14

(g1) original requests matching true the new components, or original requests failing to match any new connection components and belonging to HTTP or POST type;

(g2) original requests matching the false components or original requests failing to match any new connection components and not belonging to HTTP or post type;

VIII. Selecting from the identified data packets, HTML data files relating to primary requests ("respective primary responses");

IX. Generating "virtual" secondary requests according to the respective secondary responses;

X. Selecting from the identified data packets responses relating to secondary virtual requests; ("respective secondary responses"); and

XI. Simulating web page presentation on the terminal agent according to the respective secondary responses.

2. The method of Claim 1 further comprising the steps of:

- Selecting virtual secondary requests currently not matching any respective original responses ("unanswered secondary requests ");

- Retrieving content form local cache of terminal agent ("virtual cache") if original browser local cache ("original cache") was used relating to unanswered secondary requests;

- Simulating web page presentation on agent terminal according to data relating to the unanswered secondary requests if the virtual cache contains such data; and
  - Displaying error messages at the respective places on the agent terminal if the virtual cache does not contain data relating to the unanswered secondary requests;
3. The method of Claim 2 further comprising the step of:
- Addressing via the communication line to appropriate Internet server for receiving respective simulated responses relating to unanswered secondary requests if the virtual cache does not contain data, and displaying thereof.
4. The method of Claim 1 further comprising the steps of:
- Selecting from identified data packets data relating network messages e.g. e-mail ("messages data");
  - Transforming the message data into text data file; and
  - Displaying text data file on terminal agent.
5. The method of Claim 1 where in the net work is local-area network (LAN) and the terminal is connected to the extended communication line.

6. The method of Claim 1 wherein the communication line an is an external communication line e.g. telephone line, IZDN line, optical lines, etc.
7. The method of Claim 1 wherein the net work is a local-area network (LAN), and the terminal agent is situated in a location different from that of the given terminal.
8. The method of Claim 1 wherein the given IP address is identified by the communication line provider (ISP).
9. The method of Claim 1 wherein the given IP address is identified by the communication line owner.
10. The method of Claim 1 wherein the given IP address are addresses of web site visitors and identified by a web site owner.
11. A network probe terminal for tracking a network communication line and simulating a browser ("original browser") activity of a given terminal comprising of:
- I. Connection means for accessing the network communication line;
  - II. Monitoring means for tracing TCP/IP data packets routed through the communication line;
  - III. First filtering module for selecting new connection requests ("original requests") and web page components indicating new

addresses ("new navigation components") out of TCP/IP data packets relating to a given IP address ("identified data packets");

IV. First Sorting means for dividing the new navigation components into two categories;

- (f1) embedded objects or frames ("false new components");
- (f2) hyperlinks ("true new components");

V. Second Sorting means for dividing the original requests into "primary" or "secondary" requests according to the following criteria, respectively:

- (g1) original requests matching the true new components, or original requests failing to match any new connection components and belonging to HTTP or POST type;
- (g2) original requests matching the false components or original requests failing to match any new connection components and not belonging to HTTP or post type;

VI. Classifying module for selecting HTML data files relating to primary requests ("primary responses") from the identified data packets;

VII. Request generating module for creating "virtual" secondary requests according to the respective secondary responses;

VIII. Second filtering module for selecting responses relating to secondary virtual requests; ("secondary responses") from identified data packets; and

IX. Displaying means for simulating web page presentation on the terminal agent according to the secondary responses.

12. The network probe terminal of Claim 11 wherein the filtering module comprises means for selecting virtual secondary requests currently not matching any respective original responses ("unanswered secondary requests");

13. The network probe terminal of Claim 11 further comprising cache module for activating terminal agent local cache in case the original browser local cache ("original cache") has been used in response to unanswered secondary requests;

14. The network probe terminal of Claim 13 further comprising a retrieval module for addressing via the communication line to appropriate Internet server and receiving respective simulated responses relating to unanswered secondary requests if the virtual local cache does not contain data.

15. The network probe terminal of Claim 11 further comprising an electronic message module for selecting identified data packets data relating to network messages e.g. e-mail ("messages data"), transforming

the message data into text data file, and displaying text data file on terminal.

16. The network probe terminal of Claim 11 wherein the given IP address is identified by the communication line provider (ISP).

17. The network probe terminal of Claim 11 wherein the given IP address is identified by the communication line owner.

18. The network probe terminal of Claim 11 wherein the given IP addresses are addresses of web site visitors and identified by the web site owner.

100549 0111